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ABSTRACT

It is argued that a reformulation of reading and writing in the elementary grades can integrate the following three buzzwords of American education: (1) students at-risk for school failure; (2) the whole-language movement; and (3) restructuring. Critical literacy can serve as the centerpiece for empowering teachers and administrators as full-fledged professionals. A schoolwide approach to the literate use of language is described, beginning with anecdotal accounts of two correlated programs, Project READ and the Inquiring School. Project READ is a staff development program to help classroom teachers create a literate environment. In the Inquiring School, the literate-environment model extends to encompass the entire school. The implementation of these projects in a California elementary school illustrates the principles of critical literacy and the proposition that poor children should receive literacy instruction of equal challenge to that provided to students from more affluent backgrounds. It is asserted that virtually all students are capable of a level of critical literacy that allows them to thrive as adults, and that a supportive school context is essential to realizing this goal. One figure and a 53-item list of references are included. The papers's discussant is Edys S. Quellmalz in a training section entitled "Schoolwide Literacy Programs for At-Risk Students". (SLD)

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SCHOOLWIDE PROGRAMS TO IMPROVE LITERACY INSTRUCTION FOR STUDENTS AT RISK

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SCHOOLWIDE PROGRAMS TO IMPROVE LITERACY INSTRUCTION FOR STUDENTS AT RISK

Many children leave American schools without the literacy skills to thrive in our society. Societal demands for competence in thinking and communication have increased, and fewer families have the resources to teach their children the "school game." The challenge facing the nation's schools has been extensively documented. Knapp and Shields (1990a) note that "we often teach the children of poverty *less* than they are capable of learning," while Williams, Richman, and Mason (1987) report the consistent finding that a *schoolwide* effort is essential to effective compensatory education for at-risk students.

What can *schools* do to improve literacy instruction? Schools are the crucial ingredient for several reasons. We might urge families to read more to children, but such entreaties will have little influence on current societal realities. We might search for new instructional treatments for at-risk students, but piecemeal remediation has had little lasting influence. We might increase the pressure on students and teachers (higher standards, tougher selection criteria), but coercion is at cross purposes with American education and does not work anyway.

The option sketched in this chapter builds on two propositions:

- *Critical literacy*, a conception of reading and writing as high-level competency in using language as a tool to solve problems and to communicate, is the core curriculum for elementary education. Unlike prevailing notions of basic skills, critical literacy provides an "engine" advancing effective education throughout all domains of knowledge and skill.
- *The school as a community of inquiry*, building on the concept of critical literacy, can transform the school from an "assembly line" into a team of professionals working to assist all students in realizing their full potential. The same model works for both the classroom and the faculty meeting.

This paper connects three "buzzwords" now swirling through the myriad currents of American education: students at risk for school failure, the whole-language movement, and restructuring. Each theme encompasses a vital set of issues. The aim of this paper is to show how a reformulation of reading and writing in the elementary grades can integrate these three themes. The message of this paper is that critical literacy can serve as the centerpiece for empowering teachers and administrators as full-fledged professionals. When a school staff practices what it preaches and consistently promotes the effective use of language for thinking and communicating, the school is more likely to nurture student achievement. The synergistic effect of the two propositions is likely to be greatest for schools serving large proportions of students at risk for academic failure. These youngsters, more than middle-class children, depend on the school for challenge

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and direction; and these schools, more than middle-class schools, depend on the vigor and competence that comes from genuine professional interaction.

This paper describes the concept of a schoolwide approach to the literate use of language. I begin with anecdotes arising from my experience with two correlated programs, Project READ and the Inquiring School, which have been implemented in elementary and middle schools throughout the country. Project READ, the first stage of the process, is a staff development program for helping classroom teachers to create a literate environment, a setting where the literate use of language permeates the entire school day. In the second stage, the Inquiring School, the literate-environment model extends to encompass the entire school.

Stories from School

What you have to do with a story is, you analyze it, you break it into parts. You figure out the characters, how they're the same and different. And the plot, how it begins with a problem and goes on until it is solved. Then you understand the story better, and you can even write your own. (First-grader, Los Angeles)

We started our play by finding a ***theme****, something really important to us personally. A lot of us come from broken homes, so we made the play about that. We did a* ***web*** *[a semantic "map"] on HOME; that gave us lots of ideas. Then we talked about how things are now and how we would like them to be. It's pretty lonely when you don't have a daddy, or maybe not even a mommy. So the play began with nothing on the stage, and one of us came out, sat down, and said "My life is broke." We thought that would get the theme across. It worked pretty good.* (Second-grader, Los Angeles)

We thought about your suggestion—start in September with vocabulary strategies, then narrative in October, and pick up exposition and decoding after the winter break. But the team wasn't happy; "That will take the whole school year. We can move faster if we work together." They came up with the idea of four cadres, one for each component, everyone a specialist. It was great—by December, every part of the program was in place somewhere in the school. (Teacher, San Francisco Bay Area elementary school)

Several of us tried the program—it combines whole language with the skills our kids need. And it worked! My third-graders were a disaster last year, and now look at their projects. They think they can do anything, and all of them made tremendous growth in reading and writing—and motivation. But we don't have the principal's support; it's hard to find time to team with one another; and the district takes our inservice days. I like the program, but it's not affecting the school as a whole. (Teacher, San Francisco Bay Area)

It's depressing. After our success in integrating reading and writing, test scores up, students writing like crazy—then the new superintendent cuts money for staff development. Our principal is supportive, and we will keep the program alive at this school; I'm meeting just this afternoon with a new teacher to plan and observe. But our links to other schools are gone. Last spring this program topped the district wish list—as a write-in! But I don't know what will happen now. (Teacher, Sacramento)

Tales like these are familiar to anyone who has worked directly with schools, especially those serving children from poor communities, in which demands are heavy and resources are slim. The stories have two morals. First, they demonstrate that students from at-risk backgrounds can become fully literate; they can acquire the capacity to use language to think and to communicate at the highest levels. Accomplishing this goal calls for a unified effort from the earliest grades onward. Second, the effort requires of teachers and administrators the same advanced level of literacy in dealing with one another as colleagues. This step calls for *fundamental change*, for *restructuring* of the institution. The process begins in the classroom, but it becomes self-sustaining only as it encompasses the entire school.

My story of an approach to such change begins in an unlikely setting, a school with no obvious problems. . . .

Another Tale: Project READ

In 1980 I visited San Jose's Graystone Elementary School. In classrooms, students moved through the routines of the basal reader, following the neatly printed daily schedule, the class arranged in three groups by ability, one working with the teacher and the other two intent on their assigned worksheets. The scene was familiar to me, similar to my experiences in elementary schools from South-Central Los Angeles to Silicon Valley.

Like most series in the past quarter-century, the basal readers at Graystone employed a behavioral-objectives design. The program took shape as a series of stages (Chall, 1983), beginning with decoding skills (phonics), then fluent oral reading of words and sentences, and finally "real stories." The design introduced each objective in turn, then practiced reinforced, and assessed it. The guiding assumption was that "practice makes permanent." The teacher's role was to ask questions from the manual, which included the correct answers. The routines were not especially challenging for these students, but standardized achievement scores were high and parents were satisfied.

The times were changing, however. Several teachers had moved away from the basal primer toward children's literature. Others had taken workshops in "process writing"; they were experimenting with student journals that gave children opportunities to write about personally relevant experiences—spelling didn't count. A few teachers returned from conventions excited about a new approach, "whole language." Although not quite sure about the details, they were intrigued. The principal was encouraging the staff to look into an integrated reading-writing curriculum. These images of possibilities were fuzzy, and the faculty were wary: "If it ain't broke, don't fix it."

I shared my impressions with the staff, the "good news" as well as concerns. Somewhat to my surprise, the teachers invited me back for a second discussion. They

posed challenging questions: "What does research say we ought to be doing in reading and writing?" "What reading series would you recommend?" "How *do* kids learn to spell?" "What about children with dyslexia and learning disabilities?" The teachers continued the dialogue for several reasons: genuine interest in the issues (the school was well regarded by parents and the district, and could afford risks), dissatisfaction with boring routines (even basal advocates found the lessons lifeless), and informed leadership (for the principal, curriculum and instruction were the heart of the enterprise).

As a novice at staff development, I often made naive recommendations. "Maybe if you were familiar with findings from cognitive learning, linguistics, and rhetoric, you could see how to integrate reading and writing with materials you already have—like library books." The teachers were cautious, even skeptical: "Doesn't sound very practical. We can't do a lesson with one library book; we need sets of 30." "Seems like a lot of work, designing new lessons every night. Where will we find the time?" I replied that theory could be quite practical, and that students might learn more if they did more of the work. I assumed that, given sound and simple concepts, classroom teachers would make good instructional decisions. My previous experiences with teacher-proof packages had convinced me of the futility of that approach, and I believed that the principal could support the initial stage of change, even though it called for a major shift in teachers' decision-making.

Summer Institute: Discovery Learning

The meetings led to plans for a week-long summer institute, a collaborative enterprise between our Stanford team and the Graystone faculty. Inservice workshops typically handed teachers routines and recipes. I cautioned the staff that I could recommend principles and procedures from research, but that they were the experts in practice.

We designed the institute around integration of reading and writing, but our plans soon encompassed the entire language arts spectrum. We included psycholinguistic concepts and methods from rhetoric (Booth, 1989), with concrete examples from a teacher familiar with "language experience" techniques (Ashton-Warner, 1963). A kindergarten teacher showed how storybooks could support the emergence of literacy in young children *before* they mastered phonics. A fourth-grade teacher described her "bootleg" drama program; her practice was to move students quickly through the basal readers, so her students had the spring to write and produce their own plays. The teachers stressed the importance of spending time reading to students, encouraging discussion, and supporting creative activities like compositions and presentations.

Some teachers asked, with concern: "When do you teach 'reading'?" A crucial insight into this question came from the realization that literacy was a matter of *mode* more than *medium*, that the literate person has acquired a distinctive style of language

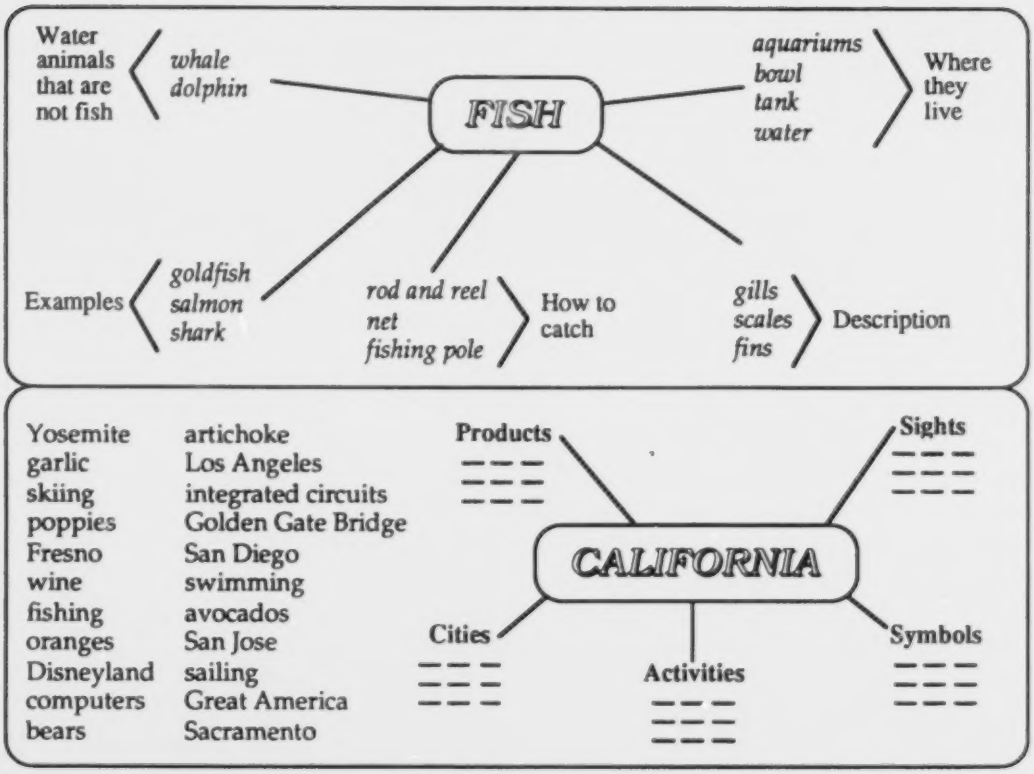
use whether reading or speaking, writing or listening (Horowitz & Samuels, 1987; Tuman, 1987; Olson, 1989). When first-graders contrast the characters of Swimmy and Frederick (Lionni, 1985), they are learning literate ways of thinking, even though the teacher may handle the mechanics of reading and writing. Teachers began to question the "no pain, no gain" philosophy; perhaps a reading lesson could promote growth in literacy even if it was enjoyable.

From the institute emerged a curriculum framework that linked oral language development with the technology of print. Our group agreed that students needed to learn skills, which took shape not as piecemeal objectives but as advanced-level *structures* and *strategies* for handling topics and texts. The basic building blocks came from rhetoric, which students usually encounter in high school and college, if at all: concepts like character and plot, semantic maps and compare-contrast matrices. Some teachers worried whether low-ability students could handle these abstractions; my recommendation was to experiment—try the strategies and see how they work.

Translation and simplification of the research ideas were important. For instance, "semantic map" is a mouthful (and head-full) for kindergartners. The underlying concept is simple; any topic of moderate familiarity can be diagrammed as a small set of nodes that organize the details. The result looks like a spider web (Figure 1, top panel); *web* is a workable label for young children. The *strategy* for producing a web *structure* is relatively simple. The teacher asks students to free associate to an everyday word like *fish*, writes their reactions on the board in clusters, and then asks them to justify each cluster. The middle panel of Figure 1 shows a second, more demanding strategy. Here the teacher records the responses in a list, and students then have the job of devising clusters that make sense to them.

A second rhetorical structure, the compare-contrast matrix, is shown in the bottom panel of Figure 1. Processing demands in this strategy are greater than for the web; the student must hold two or more topics in mind, while simultaneously considering dimensions on which the topics are similar or different. We called this structure a *weave*, a label familiar to most kindergartners. One strategy for constructing a weave begins with a pair of webs; "What words do Charlotte and Wilbur use to describe Charlotte in *Charlotte's Web?*" From these two collections, students arrange the words into a matrix.

WEB



WEAVE

CHARLOTTE	WILBUR
sharp	fierce
clever	scheming
lived by her wits	brutal
trapper	bloodthirsty

FIGURE 1 A "SEMANTIC MAP": EXAMPLES OF WEB AND WEAVE

First-Year Aftermath: New Discoveries

In September, after the summer institute, Graystone teachers proceeded to implement the ideas. They were generally pleased with the results. They found that the structures and strategies allowed students at all grade levels to "compose" complex but coherent texts, given some instructional support and an occasional transcriber. Teachers discovered that kindergartners as well as fifth-graders, low-achieving "robins" as well as the "cardinals" in the high group, had greater potential than they had thought. They were impressed with changes in student interest and interaction. They found themselves shifting roles from possessors of knowledge to orchestrators of learning. The high-level routines supported cooperative learning and tutoring; the suggestion to "web" a topic allowed a student team to generate a multitude of ideas with minimal guidance.

The Stanford team had emphasized the importance of metacognition (thinking about thinking) and metalinguistic awareness (talking about language) during the institute (Garner, 1987; Palincsar & Brown, 1984). Metalearning leads children to apply what they have learned in one setting to a novel situation; they are more likely to transfer knowledge and skills when they are explicitly directed to look beyond the limits of the initial learning (*meta* is Greek for *beyond*). Salomon and Perkins (1989) refer more simply to "high-road" transfer, which depends on reflection as well as practice.

The Graystone teachers took on this challenge and began to create *meta-instructional* lessons, in which students shared responsibility for setting the purposes and outcomes of a task. This shift in emphasis was accidentally fostered through classroom observations of the Stanford staff, who asked students: "What are you doing? Why are you doing it?" These questions tapped meta-awareness, providing useful feedback about program effectiveness, but teachers also saw the questions serving an important function during teaching and learning. Students often knew more than teachers expected (Peterson, Clark, & Dickson, in press). Fulghum (1990) comments, "To answer the question, 'How do children learn?'... I asked children. Because they know. They have not been hanging in a closet somewhere for six years waiting for school to begin so they could learn" (p. 90).

Evaluation of the first year of Project READ (Calfee & Henry, 1986) showed positive outcomes on standardized measures of student achievement. Teacher morale was high, and Graystone began to attract visitors from other district schools. The next year the program was recommended by the administration to six inner-city schools in the district. We soon discovered the meaning of "institutional support." The new schools served student populations we would label today as at risk, but we came to doubt that the children were the problem. In classrooms that adopted critical-literacy strategies, improvement in student achievement was sudden and dramatic (by achievement we meant children's competence in reading and interest in writing, not standardized scores). But the schools were overburdened with conflicting programs; time and resources for

staff development were sparse; and staff expectations and vision were eroded by years of frustration.

The second year was instructive for us. On the one hand, we were encouraged by the outcomes for students whose home and family backgrounds were quite different from the Graystone neighborhood. On the other hand, institutional barriers to program implementation were daunting. As years have gone by, I have realized that the "second year" taught us a significant lesson about improving literacy instruction for schools serving the children of the poor: improving problem solving and communication at the *school* level was essential to sustain problem solving and communication in classroom practice.

Basic Principles of Critical Literacy

The Graystone project sprang from dissatisfaction with existing practice and the search for a workable alternative to prevailing approaches in language arts instruction. We—the Graystone faculty and the Stanford team—were neither radicals nor romantics. On the one hand, we had to rely on existing resources and materials (California's tax-limitation initiative had passed four years previously). On the other hand, we had to keep in mind the realities of accountability, including standardized tests.

We began by rethinking the reading–writing curriculum. In 1980, this term meant textbooks or scope-and-sequence charts. We moved away from this definition and turned back to the original meaning of *curriculum* as a *course* of study. A young person entering high school requires full command of the language to handle the challenges of secondary education and life thereafter. It was this shift in perspective that took us from a view of reading and writing as "basic skills for handling print" toward the concept of *critical literacy*: the capacity to use language in all its forms as a tool for problem solving and communication.

This change in conception may appear subtle, but the implications are substantial. Phonics is no longer the gateway to literacy but part of a tool kit. Student discussion is no longer ancillary to instruction but an essential constituent. Comprehension is not satisfied when students give simple answers to literal questions, but only as they can reconstruct the text and connect it to personal experience. Composition is no longer an optional activity inserted when convenient, but a crucial counterpart to comprehension from the earliest grades onward. The conception foreshadowed the current emphasis on whole-language approaches to literacy (Goodman, Smith, Meredith, & Goodman, 1987; Weaver, 1988), which emphasize purpose and meaning in all facets of language arts instruction.

The curriculum of critical literacy builds on five principles:

- The rhetorical techniques that support critical literacy can be taught from the earliest grades onward.
- Although students vary widely in the experiences they bring to the classroom, the potential for linguistic, cognitive, and metacognitive growth is remarkably constant for children of varying backgrounds.
- The key to effective development of intellectual potential is the acquisition of effective organizational strategies.
- In the school setting, the foundation for practical realization of the first three principles is a fundamental change in the design of the daily lesson.
- Literacy for tomorrow's students requires them not only to read and write but to possess an explicit understanding of how language operates for thinking and communicating.

The first of these principles comes from *rhetoric*, a set of techniques found in college composition texts and "how to communicate" seminars. Psychologists have applied the techniques in recent years to study structures of knowledge, such as story grammars and expository patterns (Calfee & Drum, 1986; Orasanu, 1986). These methods are generally judged as too advanced for any but the most able students and then only in the later grades. We thought that the techniques could be interpreted to mesh with the capacities of kindergartners, not because we were "pushy" but because we thought that children at all grades would find the techniques both challenging and helpful in reading and writing.

The second principle emphasizes the *constancies* in human thought and language (Calfee & Nelson-Barber, in press). Educators observe individual differences among students; they are less tuned to noticing similarities. For instance, all kindergartners enter school as full-fledged language users; they have a rich vocabulary store organized in semantic networks, and they can use story schemas to talk about cartoons and fairy tales (Applebee, 1978). They do not realize that they possess such rich resources, however; they are not strategic about learning or performance, and they lack a metalanguage for talking about knowledge and language. They also vary enormously in the match of their experiences and styles with the conventions of schooling. Nonetheless, and despite observed variations, every child has the basic intellectual potential to achieve the goal of critical literacy.

The concept of common intellectual potential is especially important for enhancing the education of children at risk for academic failure. As Graham (1987) has pointed out, today's elementary curriculum is a fixed track, where every student must leap the same hurdles wearing the same uniform. A youngster lacking conventional knowledge and skill must run the race barefoot and with bound ankles. A deeper understanding of the reading-writing curriculum can open the way for students' experiences and styles to serve as bases for acquiring the tools of literacy.

Despite decades of research to the contrary, breakdowns in communication are still attributed to student deficits. For instance, a recent newsletter for practitioners twice quoted teachers in despair over children who entered school "not knowing their colors" (*NEA Today*, 1990, pp. 3, 29). Colors and color names are acquired early, usually by two or three years of age, by virtually all children in all cultures. What is it about instructional practice that stifles children's capacity to express themselves in the classroom about such simple matters (Heath, 1983)? Knowledge of story structures has equal validity whether gained from children's memories of folk stories from the mountains of Oaxaca, the jungles of Cambodia, or the most recent episode of Teenage Mutant Ninja Turtles, whether applied to an expurgated basal text, a prize-winning piece like *The Polar Express* (Van Allsburg, 1985), or a tale from *The People Could Fly* (Hamilton, 1985). The fundamental principle is to draw on what children *do* know as a foundation for learning.

The third principle addresses the issue of *organization* in human thought. The human mind has virtually infinite potential to store experience in long-term memory, but the attentional capacity of short-term memory is quite limited (Calfee, 1981). Hence the K.I.S.S. principle—"keep it simple, sweetheart." This description of the human mind holds for virtually every person, regardless of age, intelligence, or socioeconomic level. To be sure, some children grow up in homes that surround them from the earliest years with experiences that help them make sense of the world's complexities. More to the point, children from middle-class homes learn the routines that are the bread-and-butter of the typical school day. They play "animal, vegetable, and mineral" (a simplifying strategy), and they even play "school" (responding to silly questions where the asker already knows the answer).

The K.I.S.S. principle has intuitive appeal but "simple ain't easy." In fact, simplicity is a scarce commodity in today's schools. The reading curriculum is often a chaotic collage of bits and pieces (Knapp & Shields, 1990 a, b). Lessons lack any sense of purpose or connection to personal experience. Pull-out programs add to the turmoil. Tests appear out of the blue, sometimes during a student's first week in a new school.

The critical-literacy curriculum builds on the concept of "chunks." The mind can handle about half a dozen distinctive pieces of information (chunks) at any given time. This principle applies to both students and teachers. Selecting workable units is the key to effective use of intellectual resources. Hence the question: What can serve as the foundational elements of an integrated language-literacy curriculum? In Project READ we shaped an answer around the linguistic analysis of spoken language into *phonology*, *semantics*, and *discourse*. Counterpart building blocks—decoding and spelling within phonology, vocabulary and concept formation within semantics, comprehension and composition of narrative and expository texts within discourse—provided a simple set of benchmarks for deciding what to teach from kindergarten onward (Calfee & Drum, 1986).

We found it possible to divide each component into a few "sub-chunks" with accompanying graphic structures and instructional strategies. The decoding-spelling strand, for instance, breaks along two dimensions: language origin and level of analysis. English is a historically rich language, with layers from Anglo-Saxon, Romance, and other sources. Spelling patterns at each layer have distinctive features at both the letter-sound and morphological (word part) levels (Balmuth, 1982). In kindergarten, the word-part strand leads children to examine compound words from Anglo-Saxon: "You know *doghouse* and *raincoat*; what do you think about *rainhouse* and *dogcoat*?" In sixth grade, students can explore Romance combinations: "See what you can make from these prefixes, roots, and suffixes; *inter-*, *bi-*; *-nation-*, *-system-*; *-al*, *-ness*." Some combinations are real, while others have not yet entered the language. The curricular goal in both instances is to engage students in unpacking complex words. The instructional strategy gives students basic building blocks and the task of "making your own words." The result is X-ray capacity to see the elements in *peregrinations* and to write *nononsenseness* with confidence (as no-non-sense-ness). Children for whom Spanish is the first language gain an advantage from their familiarity with the Latinate pattern (prefix-root-suffix), which is less well known to native English speakers (Henry, Calfee, & Avelar La Salle, 1989).

The fourth principle centers on *lesson design*. Basal lessons are typically a composite of curricular objectives and scripted activities. Lesson design in Project READ follows two criteria: (a) clarity of curricular goals, and (b) dependence on students' collective experience to achieve the goals. The first criterion is supported by the lesson *opening* and *closing*, the second criterion by the *middle* activities.

In the opening and closing, the teacher briefly lays out the content, process, and structure of the lesson. The content is the topic, process is the means of analysis, and structure is the picture that synthesizes. The middle activities then lead students to explore the topic, with the teacher as facilitator.

Here is an example. A first-grade class starts a lesson on food. The topic is familiar but has opportunities for problem solving and communication; grocery stores and menus both entail categorization (Barton & Calfee, 1989). The teacher begins:

> *We all know something about food; let's see what's on your mind. We'll do this by webbing; let's first find out what you know about the topic, and then we'll organize the information. What comes to mind when you think about "food"? I'll write your ideas down.*

This brief presentation is the opening; it states the topic (food), identifies the process (free associations and clustering), and lays out the structure (a web).

The move to the middle was quick: "What comes to mind. . .?" The teacher's request for associations is genuine and opens the way for discussion. The move to structure is equally direct. Once students have generated a collection of associations,

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the next step is to cluster the array; "How can we can bunch the words?" The emphasis throughout the lesson is on students' thoughts, rather than extracting correct answers. The lesson employs commonplace content to assist students in acquiring high-level structures and strategies of broad applicability. The latter components provide the basis for "high-road" transfer (Salomon & Perkins, 1990; Calfee, Avelar La Salle, & Cancino, in press), as students discuss application of the structures and strategies in situations that go beyond the specifics of the lesson.

Explicitness is the fifth curriculum principle. Rhetorical devices like the topical net, along with explicit labels (webbing), allow students to talk about language and thought. Questions are open-ended and probe for explanations. "What comes to mind when you think about food?" is an authentic question, more so than "What goes with ice cream?" Equally important, any answer is an opportunity for the student to make public his or her reasoning. "Pickles and peanut butter! What an unusual combination. How did you come up with that?" Our natural response is to react to weird answers with strained expressions. When a teacher acknowledges the unusual nature of an answer and then probes for the underlying reasoning, virtually any response becomes a creative exercise. This strategy extends the theme of metacognition to all interactions and transforms playful impulses into metainstructional exchanges.

The Inquiring School

After the Honeymoon

Initial results from READ were encouraging, as measured by student performance and teacher morale, both quantitatively and qualitatively (Calfee, Henry, & Funderburg, 1988). But Graystone was a "rich folks'" school—what is the connection with advancing the achievement of children at risk for school failure? The answer reflects 10 years of experience since Graystone, during which we have explored the same concepts in the inner cities of San Jose, Los Angeles, Pittsburgh, Omaha, and New York, as well as rural sites near Sacramento and Santa Cruz, California. Initial efforts at extending the program were frustrated by institutional barriers: lack of time, limited resources, overburdened agendas, well-intended but disconnected top-down programs, and frustration from years of experience with miracle cures.

We persisted with the READ experiment, nonetheless, simplifying strategies, fine-tuning structures, building the network of colleagues. Within five years, READ workshops had been held in more than two dozen sites around the country, many in collaboration with model schools. Classroom observations convinced us that low-achieving elementary students were indeed capable of handling advanced concepts, that their background was not a major barrier to development of high-level skills. Teachers frequently expressed surprise at the talents of these "disadvantaged" students.

For instance, in a webbing lesson on the concept of *weather*, a student gave *volcano* as an associate. Pressed to explain, he referred to a newscast of a volcanic eruption in the South Seas that darkened the skies around the globe. His teacher commented:

> *This student is junior-high age, but he hasn't passed the standards test. I thought his problem was deficient language and experience—and motivation. But now I know that he watches the TV news, he understands it, he connects it to his personal experiences. I'm astounded!* (New York City teacher)

In a school serving families from tenements on New York's Lower East Side, a first-grader listed creatures in Lionni's *Swimmy*: a crab, a jellyfish, and a "snaky thing" (an eel). The teacher commented:

> *Normally I would have corrected her: "Not a crab; what was it [a lobster]?" But I thought, this child arrived from Puerto Rico only a year ago. She may not know the concept of crustaceans, but she sees the connections. Her "wrong answer" tells me more than the "right one" about her ability.* (New York City teacher)

Both examples illustrate the importance during metainstruction for teacher reflection on the meanings of student discourse—the value in encouraging students to say what is on their mind, reinforcing their efforts, and turning any answer into an opportunity to explore student thinking.

Nonetheless, five years of efforts to expand the program had left us with a mixed message: some remarkable successes, a few memorable disappointments, and frequent uncertainties. The successes correlated with school-level indicators of effective schooling (Brookover, 1982; Purkey & Smith, 1985): strong leadership, clear goals, and emphasis on student learning.

The "flavor" of effectiveness was different in successful READ schools, however. Strong leadership meant time spent in classrooms and with teams of teachers. Clear goals meant sustained emphasis on improved reading and writing instruction over two or three years, rather than a collage of programs. The goals were conceptual rather than operational. Teacher reactions were as important as student performance. Student learning included test scores (standardized measures showed statistically significant upward trends in READ sites), but more consequential was the quality of student writing and discussion, students' capacity to explain what they were doing and why, and the morale and togetherness of the teaching staff. In a school where READ was working, displays of student work in classrooms, the hallways, and the teachers' lounge were convincing evidence; the enthusiasm and articulateness of the faculty about student progress was compelling (Whittaker, 1990; Whittaker, Wolf, & Wong, 1989). One principal, asked how to evaluate READ, replied that she would bring a group of students into her office, select a literature book from her shelf and ask them to analyze the story. She was confident about this approach, even though it was less objective than placement in the basal reader or mastery of district competencies.

The A-ha! Experience

Once the teachers had reading and writing in place, we saw the need for other changes. After we "chunked" the bits and pieces, after we found ways to connect to students' experience rather than going through the textbook, then we realized how disjointed our categorical programs were. And so we spent faculty meetings redesigning Chapter 1, bilingual ed, special ed, and so on. We actually made a "weave," a matrix—what is our present situation, and where do we want to be in six months? What worked with kids worked for us! Now the whole day is together for teachers and students. A lot of work, but it really brought the staff together.
(Principal, Los Angeles)

In 1983-84, during a visit to Glazier Elementary School in Southeast Los Angeles, I observed a situation that led me to rethink the potential of the READ concept. The event is summarized in the anecdote above, which describes the decision by the Glazier staff to integrate categorical programs into the regular program. Glazier served students from a poor neighborhood, for many of whom English was a second language. At the principal's initiation, the faculty began to explore a "schoolwide" program—this concept is now embodied in Chapter 1 legislation, but in 1983-84 it was a radical idea. By springtime, instruction at Glazier was virtually seamless; the staff had designed and implemented a program without pull-out routines, ability grouping, or any other stigma associated with categorical programs serving at-risk students.

It suddenly came to me that the Glazier situation exemplified Schaefer's (1967) concept of the school as a center of inquiry:

> *[W]e can no longer afford to conceive of the schools simply as distribution centers for dispensing cultural orientations and information. . . . The intellectual demands upon the system have become so enormous that the school must become more than a place of instruction. It must become a center of inquiry—a producer as well as a transmitter of knowledge. . . . Not only our need for new knowledge but also our responsibility for the intellectual health of teachers suggests that schools should be conceived as centers of inquiry. [Where once] a commitment to learning throughout adult life was a necessity for a minority. . . , it is now a requirement for everyone who would not be a mere slave to the society he serves. . . . [The school must be the model] of an institution characterized by a pervasive search for meaning and rationality in its work. . . , [and students] similarly encouraged to seek a rational purpose in their studies. . . .* (pp. 1-5)

The Glazier experience was remarkable, not only for the school's accomplishments (which were impressive), but for the process that characterized the effort. The principal's explanation was exquisitely simple: "We use the same techniques in faculty and team meetings that we teach students in the classroom. Webbing and weaving help our students solve problems and communicate with one another. No reason why we grownups can't benefit from the same approach."

In May 1984, the school was a visitation site for the International Reading Association convention in Los Angeles. The bus load of teachers and administrators that roamed through classrooms heard a common technical language and educational

purpose from principal, teachers, and students. They saw variety in the style and quality of the program and heard a few complaints. For instance, a fourth-grade boy said he preferred worksheets; "Now I have to do a lot more thinking and talking." Although the young man's complaint was earnest, his reflectiveness (as well as the quality of his writing project) suggested that he was prospering under the new regime.

In the years since Glazier, my colleagues and I have explored the concept of the Inquiring School in numerous contexts (Calfee, in press). The basic idea is simple: students are more likely to acquire critical literacy if the practice pervades the entire school. The argument also works in the other direction: restructuring the elementary school depends on the effective use of language for the problem solving and communication that should be at the heart of the reading-writing curriculum from the earliest grades onward.

This motif sometimes emerges naturally; the principal emphasizes a literate style of discourse throughout the school; the resource specialist initiates team meetings or study groups; the school faculty take collective responsibility for shaping the program (as in the third anecdote at the start of the paper). Spontaneous events like these are rare and easily snuffed out, however, especially in schools under fire because of low student achievement.

Creating the Inquiring School

The critical question, of course, is how to develop an Inquiring School by design rather than serendipity. Our experience over the past few years suggests that the task is possible, and that the key is to begin with a focus on curriculum and instruction, the heart and soul of elementary schooling (Bean, Zigmond, & King, 1990; Heisinger, 1988; Whittaker, 1990). Hence, we generally advise a school to develop a READ cadre at the outset and then move toward a schoolwide effort after a year's experience with the techniques.

What are the characteristics of an elementary school that distinguish it as an Inquiring School? The first ingredient is the presence of a few clearly articulated goals about the educational purpose of the school and the techniques used to achieve those goals. Whether a visitor asks principal, teachers, students, secretary, or custodian everyone responds with the same message.

A second ingredient is summarized by K.I.S.S.; the concepts, practices, and technical language of the school all support the attainment of this small number of distinctive and overarching goals, all centered around a common thematic purpose. Rather than the collages of routines and programs that are so commonplace in today's schools, all the pieces fit together into a coherent package.

The third ingredient is a problem-solving stance by the entire community. Research shows that low-achieving students tend to attribute success to luck and failure to lack of ability (Dweck & Leggett, 1988); I suspect that the same pattern holds for organizations as well as individuals. In the Inquiring School, the group takes charge of problems; here is where critical literacy plays a key role by facilitating communication.

Our design for supporting development of the Inquiring School model is still in the early stages, but we have identified three components that seem critical:

- Effective small-group processes
- Techniques for self-study and evaluation
- Individual efficacy.

Our focus here is on the adults in the school, but again it seems that success in these three areas is likely to have an impact on students as well as staff.

The reasoning behind these three items is as follows. First, if teachers are to break through the isolation that pervades schooling today, they need a set of formal routines for working as a team. Our approach is to build on the lesson-design methods from READ as a model for planning and conducting effective meetings. Second, once teachers have techniques that foster collaboration, they can benefit further from systematic methods for problem solving; from recent studies, "teachers as practical researchers" seems to us a promising direction. Finally, the advantages of the Inquiring School model entail cost to the individual, and it is important to show individuals how to "recharge their batteries" and to handle the tensions between leadership and collaboration.

We have given the most attention thus far to the first item on the list, small-group process, because it flows naturally from the READ lesson design. In planning a problem solving meeting, whether for the entire school faculty or between two teachers in a peer-coaching session, it makes sense to consider the opening, middle, closing, and follow-up of the session, and to think about the processes for analyzing the problem and the structure for framing the solution. The explicit connection between the classroom and the school can be an immediate and powerful demonstration of the long-term value of the techniques of critical literacy. Webbing, for instance, works well to draw out kindergartners, but it serves adults equally well under the fancier label of *brainstorming*.

It is important to make these connections explicit, rather than relying solely on intuition. The usual assumption is that educated adults are naturally adept at working together; in fact, it is a demanding human endeavor. Summer institutes and workshops provide teachers with opportunities to practice communication and decision-making techniques (Saphier, Bigda-Peyton, & Pierson, 1989). Anyone who has conducted workshops knows the enormous outpouring of teacher talk. Unless guided, however, these exchanges remain at an informal level of discourse. By explicit rehearsal of group

problem-solving techniques, school teams gain expertise that sustains the skills when they return to the schoolhouse, where team spirit can be dampened by day-to-day commonplaces. Our institute agenda addresses this issue explicitly: "When will you hold your first team meeting? What will be the agenda? How will you monitor the quality of the session?"

We have given less attention to the other two Inquiring School elements mentioned above. It has been suggested that *internal program evaluation* complement mandates imposed from above, that teachers and administrators take initiative as researchers (Cochran-Smith & Lytle, 1990). The benefits from this shift in perspective can be substantial. As teachers acquire a taste for working in a professional collaboration, they (re)discover the value of teamwork (Duckworth, 1987; Lampert, 1984; Rosenholtz, 1989). They learn to reflect on their own learning and development (Peterson, 1988; Zeichner & Liston, 1987). Strengthening *individual efficacy and leadership* is supported by several writers (Covey, 1989; Cuban, 1988), usually as a sidelight to the more important work of the school. We are currently exploring connections between this element and the concepts of critical literacy—language plays a critical role in self-awareness and self-confidence. In the Inquiring School model, teachers are routinely expected to demonstrate their craft and explain their reasoning, both of which are powerful catalysts for professionalization (Richert, in press a, b).

Final Lessons: Application in At-Risk Settings

The proposition that poor children should receive literacy instruction of equal challenge to that provided students from more affluent backgrounds permeates this paper. The READ/Inquiring School model turns topsy-turvy several assumptions and practices for education of the disadvantaged:

- Instruction based on rote repetition ("They can't handle abstractions") is displaced by student activities that encourage independent thought and collaborative teamwork.
- A piecemeal curriculum is supplanted by purposeful projects built around student experience, and aimed toward transcendental outcomes (e.g., the meaning and responsibilities of democracy).
- Standardized assessment is complemented by performance on genuine projects (e.g., the first-grade production of "Broke" sketched earlier).
- The school faculty, isolated and fearful of higher-ups, frustrated by student "failure" and lack of interest, turns with renewed expertise and vigor to the task of education.

My experiences over a decade in dozens of schools have left me with two lessons, both noted earlier but worth repeating. First, *virtually all students* are capable of a level of critical literacy that allows them to thrive as adults. Moreover, *virtually all teachers* have the intellectual and motivational capacity to support students in achieving this goal.

The second lesson is that a supportive school context is essential to realizing these goals. Schools serving children from disadvantaged neighborhoods face barriers of significant proportions, ranging from bureaucratic intrusions through skeptical expectations. Success depends on the curriculum materials, the techniques for instruction, the organizational arrangements, the principal's leadership style—and the financial resources available to the school. But none of these elements is as critical, in my opinion, as the substance and style of faculty interactions. When these interactions mirror the tenets of critical literacy, then the foundation exists for student success, for a schoolwide community of inquiry. Then teachers will fully realize their potential as a collective of intelligent, creative, and caring individuals. Then the hurdles of poor communication, low morale, and limited resources can be surmounted by teachers who reflect the highest standards of the professional vision that attracted them to schooling in the first place.

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DISCUSSION: SCHOOLWIDE LITERACY PROGRAMS FOR AT-RISK STUDENTS

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My response to the schoolwide programs described to promote literacy in at-risk students draws on 25 years of experience in education, including teaching English and history at a low-income junior high school in Los Angeles Unified School District; directing curriculum development projects in reading, composition skills, art, and higher-order thinking skills; and teaching courses in cognitive and instructional psychology, critical thinking, and the design of assessment instruments at Stanford University. In my current position as director of the Region F Chapter 1 Technical Assistance Center, I have worked with state and local education agencies in nine western states to address their needs in Chapter 1 curriculum and evaluation issues. From these experiences, I have developed a strong awareness of the complexity of school change; I have also maintained the conviction that we can, and must, improve the schooling of disadvantaged students.

Developing the literacy skills of students considered at risk presents a formidable challenge. Many of these educationally disadvantaged students suffer the twin problems of poverty and low academic achievement. To help these students catch up to the achievement levels of their peers, compensatory education programs historically have used a range of in-class and pull-out models to supplement instruction. Partly in response to the educational reform movement's call to restructure and improve schools, the current Chapter 1 regulations permit use of Chapter 1 funds to develop schoolwide projects for at-risk students. Designers of these programs are seeking guidance for changes in the structure and methods of their Chapter 1 programs.

In "Schoolwide Programs to Improve Literacy Instruction for Students At Risk," Robert Calfee describes two programs he has developed. His Project READ and the Inquiring School embody research-based strategies that Chapter 1 practitioners could well incorporate in the design of schoolwide projects. As the reactor to Calfee's paper, I will highlight key elements of his programs and examine their link to components of Chapter 1 schoolwide projects. I will examine the research-based strategies in his and other schoolwide and literacy projects, then propose what else we need to know or do to plan and implement programs that will improve the literacy development of disadvantaged youth.

What Are Schoolwide Projects?

Schoolwide projects are school-site attempts to apply the general elements of restructuring in a particular context. Restructuring may involve changes in organization, curriculum, instruction, and assessment. Key characteristics include school-site authority and decision-making, redefinition and combinations of staff roles, redesign of curriculum and instruction to promote higher-order thinking, and thoughtful assessment of student achievement. Some restructured schools may radically reorganize the entire school structure, program, staff, and accountability systems; others may concentrate on redesign of fewer components. To provide a context for evaluating Calfee's programs, I describe some other prominent schoolwide efforts below.

A number of projects provide examples of attempts to redesign the entire school program. The organizational, curricular, and assessment components of these programs provide a backdrop for viewing applications of effective practice and the relationship of Calfee's Project READ and the Inquiring School to them.

The School Development Program introduced by James Comer of Yale University has focused for 15 years on the achievement of inner-city children. His project, now implemented in a range of school districts throughout the country, addresses all aspects of the school structure. The program includes a governance and management team, a mental health team, and curriculum and staff development activities. Schools following the Comer model have been evaluated extensively with the finding that student achievement increases (Haynes, Comer, & Hamilton-Lee, 1988). Another restructuring program, Project Zero at Harvard University, is examining a series of pilot projects designed around the theory of multiple intelligences advanced by Howard Gardner. He proposes that at least seven distinct intellectual capacities—linguistic, musical, logical-mathematical, spatial, bodily kinesthetic, interpersonal, and intrapersonal—are used to approach problems. The programs combine in-depth school project work with extended exploration and apprenticeship in the community (Brickley & Gardner, 1990).

Henry Levin of Stanford University recently has advanced his concept of Accelerated Schools. In pilot projects in several states, school staff and community collaborate as a management team to create a central vision for the school and plan strategies to coordinate staff development, curriculum and instruction, parent involvement, and community services. The programs emphasize language; some employ Calfee's Project READ (Levin, 1987).

As in Calfee's projects, literacy forms the centerpiece of two other programs. Robert Slavin of Johns Hopkins University has developed the Success for All program based on his research with disadvantaged students. Key ingredients are intensive, early prevention and intervention, frequent assessment, and family support teams. Initiated primarily as a highly structured reading program, the project is being expanded to other subjects as well (Madden et al., 1989). In a state-initiated effort, the Arkansas

Department of Education has developed the Multicultural Reading and Thinking (McRAT) project as an interdisciplinary program designed to improve students' higher-order thinking strategies as they apply to reading and social studies. The administrative, staff development, instructional, and evaluation components of the program have been implemented for five years in districts across the state (Quellmalz & Hoskyn, 1988).

Although these established restructuring programs evolved from different origins, they share elements essential to the success of any schoolwide effort. Schools seeking to design a schoolwide project for compensatory education should examine closely the effective procedures reported by these and Calfee's projects.

Schoolwide Projects' Organizational Elements

The practitioner seeking guidance on how to change organizational elements of the school will find some information in various sections of Calfee's paper. Calfee describes the organizational features of his programs as *strong leadership*, exhibited by time spent in classrooms with teams of teachers, *focus on a few simple, conceptual goals* sustained over two or three years, *integration of categorical programs* into the core curriculum, and adoption of *critical literacy as the process for professional interaction* about school goals, change strategies, and outcomes. Calfee repeatedly emphasizes that Project READ and the Inquiring School propel changes in the school structure with critical-literacy strategies such as the weaving and webbing activities described for classroom reading and writing instruction. Calfee writes that these techniques are used by school faculty as tools to consider ways to revamp staff development, curriculum planning, instructional strategies, and assessment of student success. Although the procedures are not detailed in his paper, Calfee references recent attempts to document team decision making and internal evaluation. He also mentions plans to develop strategies for individual development and for leadership. He emphasizes, however, that the style and substance of critical-literacy communication strategies promote reflective professionalism and empower a schoolwide community of inquiry.

Calfee's programs differ from many of the other efforts described above in their origins. His programs developed as "bottom-up" *curriculum* projects that focused on strategies for organizational change and support only as they became necessary. Other restructuring programs have begun as "top-down" *organizational change efforts*, with curriculum as only one component.

The research base for the organizational elements necessary to restructure the entire school program includes and goes beyond Calfee's descriptions. The research suggests that critical aspects of organizational change are:

- Strong leadership
- Clear goals

- Collaborative involvement of all school staff in plan development, implementation, and evaluation
- Reconsideration of staffing patterns
- Provision of time and resources for collaborative planning, staff development, and reflection
- Reconsideration of class and staff schedules.

The research also indicates that the change process requires extended time.

Some restructuring programs, such as Comer's and Levin's, include school-based governance teams to develop a unity of purpose and feeling of empowerment in the school. Leadership and collaboration of the teams lead to development of clear goals. Calfee's recommendation that the goals be few and conceptual meshes with my experience with the Arkansas and Chapter 1 projects. When schools attempt too many changes, the change efforts may lose focus and coherence. Too often, staff development plans present one-shot, brief presentations that are not elaborated by extended sessions or by in-class modeling and feedback.

Staff Development Requirements

Alternative strategies for rescheduling class and staff time are not often documented. Staff development may take place on pupil-free days; during scheduled staff, grade-level, or department meetings; or during weekends or summers. Teachers may team teach, allowing one or more to be released. District or school administrators may relieve teachers so they can meet to plan and coordinate Chapter 1 and regular classroom assignments or engage in peer coaching or observations. Extensive staff development is a critical component of successful schoolwide programs. We would like to see specific ways that various schoolwide programs arrange for precious time for staff development.

Requirements for Developing Chapter 1 Schoolwide Programs

Chapter 1 schoolwide projects require a three-year effort, in recognition of the time required to implement substantive changes in schools. The federal regulations require staff, parental, and student involvement in the project planning process. The regulations also require that the plan describe the results of a comprehensive needs assessment, goals to meet the needs, strategies for addressing the needs, uses of funds, training for parents and staff, and development and implementation of accountability measures. Content of the goals, staff development, materials, and measures are left to the individual schools.

Redesigning the Curriculum

The Calfee projects have formulated an integrated language program with rhetorical structures and their components as the basic building blocks for studying topics, concepts, and strategies in literature and other subject areas. Narrative and expository discourse structures form the basis of lesson and unit design.

Cognitive research has tended to support the effectiveness of approaches in which students develop organized schemata or categories of information to capture the key concepts and strategies in a discipline. Coverage of isolated, discrete bits of information is eschewed in favor of integrated knowledge structures. The recommendations are to pursue depth, not breadth, thereby promoting more advanced skills within and across disciplines. Furthermore, projects are encouraged to develop students' metacognitive skills (i.e., skills in regulating their own thinking). The meta-instructional lessons in Project READ stress self-consciousness about reading strategies, a recommended metacomprehension goal for developing strategic readers.

Curriculum Approaches in Schoolwide Projects

Other restructuring projects resemble Calfee's programs in drawing on these research recommendations. The Key School, part of Gardner's Project Zero, has restructured the entire curriculum. Students work on extended projects during the morning hours, then explore extensions of the concepts and skills they have learned by going to community activities and apprenticeships in the afternoon. Arkansas' McRAT project teaches four higher-order thinking strategies—analysis, comparison, inference, and evaluation—within the context of studying literature and other rhetorical structures, as well as other cultures. The McRAT project also focuses on students' metacognitive skills by asking students for explanations of how they use explicit reasoning strategies and of how they would transfer the strategies to another topic, subject area, or practical application.

Other restructuring efforts address changes within particular disciplines, rather than across the entire school. Whole-language approaches are of this type, as are history/social-science and science approaches stressing extended treatment of fewer topics. California's literature-based language arts framework, which integrates literacy strategies with the study of original texts, is another example.

Requirements for Disseminating Innovative Curricula

To understand how schoolwide projects for at-risk students might revise, integrate, or coordinate curricula within and among disciplines, we need examples of the scope and sequence charts, curriculum plans, and model assignments the projects are using. Moreover, whether a schoolwide project team decides to adopt, adapt, or design curriculum reform, time must be provided for planning, staff development, and

reformulation of units. These curricular reforms are based on cognitive theories of learning, which stress very different principles from those of behavioral learning theory, on which the basic skills movement and early compensatory education programs were founded. Teachers must experience significant shifts in their knowledge of, and commitment to, these new paradigms.

Research-Based Instruction in Schoolwide Projects

Research-Based Instructional Techniques

The critical-literacy strategies used in Calfee's Project READ teach students the major discourse structures and techniques for comprehending them. Lesson design involves attention to the content, processing strategy, and structure for representing important concepts. For example, the "web," a semantic map, and the "weave," a compare/contrast matrix, provide pictorial representations of the relationships among words and ideas. The lessons also encourage student discussion, explanation, and transfer of their strategies.

The instructional components of Project READ draw on sound reading research. Comprehension research has provided evidence that comprehension is improved by building on students' background knowledge, attending to the structure of the type of material to be read, and reflecting on ideas and relationships in the text. The charting tools tap the visual modality and help students to organize and "see" the relationships among an often confusing sea of words.

Other projects have used charts, outlines, and other techniques to provide "scaffolding" for students' comprehension and composition. For example, visual mapping techniques such as story mapping, character mapping, Venn diagrams, and charts for evaluating the pros and cons of issues are central components of the McRAT project. Studies of writing programs also have found such forms of visual mapping to be important tools for helping students to plan and structure the ideas in their stories and essays.

The effectiveness of interactive instructional models such as cooperative learning and reciprocal teaching is demonstrated in extensive research. Cooperative learning and tutoring are mentioned briefly as components of Project READ. Students discuss structures and concepts of their reading; they help and challenge each other. These kinds of interactive activities, stressed in programs such as Slavin's Success for All, are sharp departures from the stereotypical "drill and kill" worksheets characteristic of earlier generations of Chapter 1 programs.

Accommodating Individual Differences in Schoolwide Literacy Programs

Effective instructional strategies for teaching reading comprehension help students not only to understand at a surface level what they have read but also to interpret and critique it. Schoolwide projects are based on the premise that instructional strategies that are effective for all students will help students who would have had additional instruction in the Chapter 1 program. Since a major goal of Chapter 1 is to promote students' advanced skills, schoolwide projects do not require differentiated instruction or materials for Chapter 1 eligible students. Nor, for that matter, do current Chapter 1 regulations prohibit supplemental tutoring for Chapter 1 students on the same assignment and materials originating in the regular classroom.

The emphasis on advanced skills for Chapter 1 students is accompanied by recommendations for direct comprehension instruction in core literature requiring sustained reading and thinking. Assistance with basic skills, such as decoding or the vocabulary required to read the book, may come during a sustained reading lesson. Similarly, assistance with the mechanics of writing may come in the context of the student's final editing process, after peer conferencing and revision of early drafts to clarify ideas and streamline coherence.

Given the long-overdue call for elimination of "drill and kill" seatwork on low-level literacy skills, we have little systematic evidence about whether special strategies are necessary or useful for promoting more advanced skills in educationally disadvantaged students. For example, all students are likely to benefit from the visual mapping techniques, but some students may need the visual mapping and scaffolding at greater levels of detail or longer. Work in student teams during webbing and weaving activities or during literary interpretation may require more structure or assistance when Chapter 1 students are involved. Models and strategies for literacy instruction for compensatory education students are sorely needed.

Assessment and Evaluation

Evaluations of the Calfee project are described only generally rather than in terms of the tests and assessment instruments used and the specific gains achieved. "Competence in reading and interest in writing, not necessarily standardized scores" are mentioned as some forms of the data. Although these projects seem to have been more consistently and closely evaluated than most restructuring and literacy programs, we still need more detail to judge the effectiveness of these and other programs. If the quality of student writing and discussion has improved, systematic ways of describing and evaluating the improvements should be reported.

A major difficulty for designers of Chapter 1 programs is that innovative programs seldom analyze achievement of Chapter 1 students separately from achievement of all students, although many of the projects have included Chapter 1 students.

Requirements for Assessment in Chapter 1 Schoolwide Programs

Assessment and evaluation requirements are central components of government-funded compensatory education programs. In the Chapter 1 regulations, schoolwide projects must not only document achievement gains but prove that the Chapter 1 students' achievement is greater than it would have been if the usual Chapter 1 service delivery model had continued. Therefore, standardized assessment and systematic evaluation are essential for Chapter 1 schoolwide projects.

The federal Chapter 1 National Reporting Standards require documenting achievement gains in basic and advanced skills. For reading programs, the comprehension subtest of a nationally normed reading test is an acceptable measure of advanced skills in reading. In language arts programs, a nationally normed language arts test that measures the program's basic and advanced skills is acceptable for national reporting.

Chapter 1 programs are encouraged, too, to use multiple measures to assess student growth and to specify performance standards for growth in terms of desired outcomes. Therefore, compensatory programs that consider additional measures of reading comprehension and basic skills appropriate and necessary should, indeed, use them.

Alternative Measures of Student Achievement

Some test publishers are developing nationally normed tests that assess comprehension of longer texts. Other likely candidates for alternative measures are the reading, writing, and integrated literacy assessments used in the regular classroom. These may include tests developed by the district, other criterion-referenced tests, writing assessments, and teacher-made tests. Portfolios of student work also may serve as formal or informal measures of progress. If the portfolios of literacy activities are meant to serve as formal assessments, however, they need to have consistent structure, content, and evaluative criteria across classrooms and schools. More informal, but instructionally useful, assessments may include portfolios of assignments in progress, drafts of writing assignments, copies of reading or learning logs, and other records of progress in literacy development. Tapes and checklists of students' reading and speaking fluency may be considered.

Experts in literacy research agree that the multiple-choice format can tap only limited aspects of reading and writing competence. Clearly, multiple interpretations are a hallmark of the literacy-based curriculum; writing must be assessed by evaluation of

actual writing samples. Districts have the authority to supplement assessment of Chapter 1 reading programs with alternative assessment formats specified in terms of other desired outcomes. Districts also have the authority to specify what constitutes substantial progress toward the desired outcomes. Currently, a number of districts are experimenting with portfolio assessments. Writing assessments have achieved acceptance if they have been developed to meet standards of technical quality.

Once again, educators committed to improving the literacy achievement of at-risk students need models of assessments deemed appropriate for measuring the goals of integrated literacy programs. Furthermore, policy makers concerned with improving the quality of Chapter 1 evaluations need evidence that alternative assessment formats meet reasonable standards of technical quality and thus can provide credible, useful evidence about the effectiveness of literacy programs for at-risk students.

Summary

The schoolwide projects to improve literacy instruction for students at risk described by Robert Calfee represent state-of-the-art strategies for teaching literacy. In this paper, I have attempted to identify the strategies of his and other literacy or restructuring efforts that seem most relevant for the design of Chapter 1 schoolwide projects emphasizing literacy. I also have noted the research-based aspects of literacy and restructuring efforts that might be useful for designers of literacy programs for at-risk youth to try. Finally, I have described information we still need to seek and models we need to see in order to understand better how to tailor general research findings to improve the literacy of educationally disadvantaged students. In looking back on the last 25 years of compensatory education, I must conclude that we have come a long way, but we have a long way to go.

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